

Application No. 10/017,201  
Amendment A dated October 8, 2004  
Reply to Office Action mailed April 9, 2004

### AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0002] with the following amended paragraph:

[0002] This application is a continuation-in-part of pending U.S. Patent Application Serial No. ~~xx/xxxxxx~~ 10/014,679, "Integrated Optical Device Including a Vertical Lasing Semiconductor Optical Amplifier," by Jeffrey D. Walker et al., filed Dec. 11, 2001.

Please replace paragraph [0028] with the following amended paragraph:

[0028] In another example, a control signal for microprocessor 150 is used to adjust the gain of VLSEA 500 in a feedback loop 170, in order to maintain an optimum average received power level at photodetector 120. This increases the dynamic range of the receiver and thereby allows the receiver to compensate for changes in loss within an optical network. Further, it significantly reduces the dynamic range requirements of photo detector 120 and microprocessor 150, enabling lower cost and improved performance in these components. Examples of VLSEAs 500 with adjustable gain in corresponding control techniques are described further in the following U.S. Patents and pending patent applications, which are incorporated herein by reference in their entirety: U.S. Patent Application Serial No. ~~09/273,813~~ 6,445,495 "Tunable-Gain Lasing Semiconductor Optical Amplifier," ~~filed March 22, 1999~~ issued September 3, 2002, by Jeffrey D. Walker et. al.; U.S. Patent Application Serial No. ~~09/299,824~~ 6,347,104, "Optical Signal Power Monitor and Regulator," ~~filed April 26th 1999~~ issued February 12, 2002, by Sol P. Dijaili and Jeffrey D. Walker; and U.S. Patent Application Serial No. 09/967,859, "Multistage Tunable Gain Optical Amplifier," filed September 28, 2001 by Sol P. Dijaili and John M. Wachsman.